TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
U.S. DEPARTMENT OF AGRICULTURE · · FOREST SERVICE

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Log Grades of Minnesota Hardwoods

According to recent surveys, Minnesota has considerably more hardwood sawtimber available for use than is being cut and utilized at the present time. A primary retarding factor is the small size and relatively poor quality of the timber.

Believing that information on the proportion of volumes in the different log grades for the principal hardwood species would promote increased utilization, the Lake States Forest Experiment Station together with the Office of Iron Range Resources and Rehabilitation conducted a sampling survey of grades in standing timber during 1953 and 1954. The sample consisted of 501 trees.

Results show that approximately 37 percent of all the Minnesota hardwood sawtimber volume is in Log Grade #3 or "Tie and Timber" grade suitable mainly for box and crate material, short rough boards, or small timbers. About 18 percent of the volume is in #2 logs, generally suitable for sawing into lumber, while only 15 percent is in #1 logs capable of being used for veneer, cooperage, and better grades of lumber. Quite often after the trees have been felled and bucked the proportion of #1 and #2 logs is found to be slightly lower than previously estimated. This may be due to hidden defects in the interior of the tree or the inability of the logger to recognize and cut for maximum grade.

Estimated distribution of merchantable volume by log grades for six of the leading species is shown in Table 1.

Table 1.--Distribution of merchantable volume by each log grade for several major hardwood species, Minn.

Species	Volume in sample	Log grades 1/				
		All grades	No. 1	No. 2	No. 3	Tie & timber
	Bd.ft.	Percent	Percent	Percent	Percent	Percent
Sugar maple	5,763	100	6	17	68	9
Basswood	12,024	100	28	34	38	-
American elm	14,097	100	26	19	50	5
Red oak	6,262	100	8	20	41	31
Aspen	2,664	100	10	10	80	-
Black ash	2,006	100	8	17	60	15

1/ For specifications see: Hardwood Log Grades for Standard Lumber, U. S. Forest Products Laboratory, Report D-1737, 60 pp., Madison, Wisconsin, 1949; and Interim Specifications for Ties, Timbers, or Construction Material (unpublished), U. S. Forest Service, Washington, D. C., 1948.

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